



## State of Utah

### Department of Natural Resources

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### Division of Wildlife Resources

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August 14, 2006

Dear Female Rocky Mountain Goat Hunter,

Congratulations on drawing a once in a lifetime Utah Rocky Mountain goat permit in 2006. Your permit allows you to harvest one **female** (nanny) mountain goat. To help make this hunt a favorable and rewarding experience, the Utah Division of Wildlife Resources (UDWR) has designed a presentation which covers the basics of correctly identifying a mountain goat as a female (nanny) or male (billy) based on its physical characteristics and behavior. A photo identification test is provided at the conclusion of the presentation. This orientation course is required for all hunters who draw **female goat only** permits.

You may review the Rocky Mountain goat orientation course and complete this requirement in one of two ways:

- 1) We have enclosed a copy of the presentation as well as an answer sheet for the ten test questions. After reading the presentation and completing the answer sheet, you may mail it to UDWR in the enclosed self-addressed envelope.
- 2) If you prefer, you may view the presentation and color photographs on the internet at <http://wildlife.utah.gov/hunting/goats>. You may also take the test and submit your answers online.

We greatly appreciate your response to this request. The orientation course should improve your ability to identify the sex of goats you encounter while hunting this fall. Please contact the UDWR regional office nearest your mountain goat unit with additional questions.

We wish you the best of luck with your hunt!

Craig R. McLaughlin  
Big Game Program Coordinator

Adam Bronson  
Big Game Project Leader

P.S. - We have also included a pocket card for you to use in the field. This card can provide a last-minute review of distinguishing characteristics of female goats during your hunt.

#### 2006 Female Only Rocky Mountain Goat Hunts

Hunt No.	Hunt Name	Unit	Season Dates	Regional Office
971	Ogden, Willard Peak	03	9/30 – 10/08	Northern Region, Ogden 801-476-740
972	Ogden, Willard Peak	03	10/14 – 10/22	Northern Region, Ogden 801-476-740
983	Beaver	22	09/16 – 10/22	Southern Region, Cedar City 435-753-4600

# **Rocky Mountain Goat Hunt Female Only - Orientation**



**Utah Division of Wildlife Resources**

**Craig R. McLaughlin  
Big Game Program Coordinator**

**Adam Bronson  
Big Game Projects Leader**

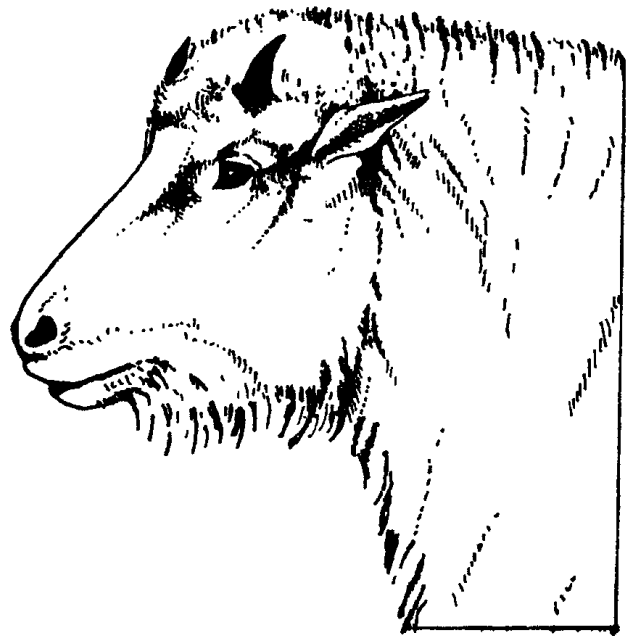
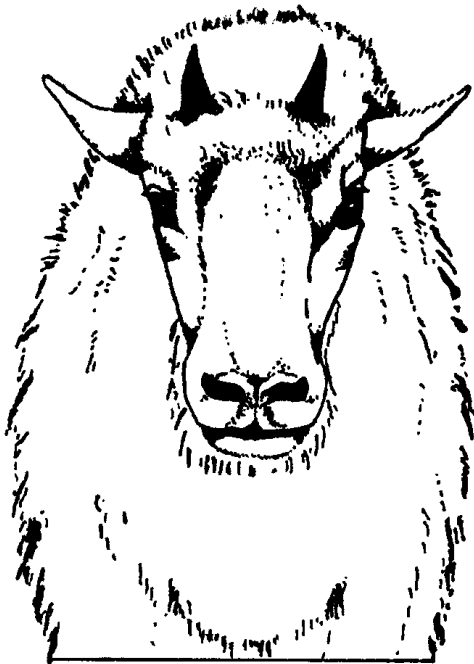


# Patience Is Key



The longer you watch a goat the better your chances for gathering enough clues to determine its sex. Mountain goats use cliffs as escape cover much like a deer running into thick brush when they are spooked. A hasty decision to shoot may result in wounding or losing an animal because you can not retrieve it from the bottom of a crevasse. Once a goat is identified, most seasoned goat hunters will wait until the goat is away from any dangerous terrain in which the animal might hang up or fall after the shot. Goats are creatures of habit and if a hunter is patient to observe a goats feeding habits they will find out that goats generally come off of the cliffs to feed early in the morning and late in the afternoon. By not rushing your shot, a hunter has an increased chance of taking the appropriate sex.

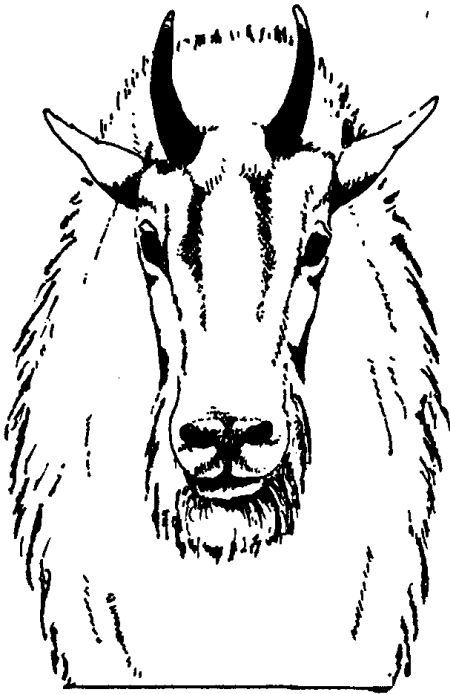
# Kid



7-50 --- Horn length, 0 to 3.5 inches

Horns barely visible early summer, and are less than  $\frac{3}{4}$  of the ear length by fall.

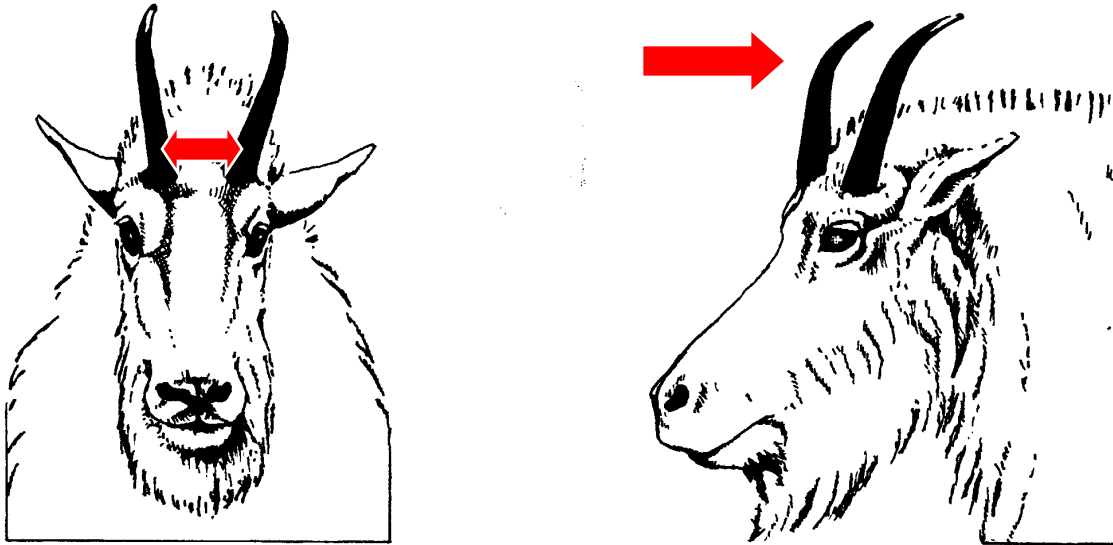
# Male and Female Yearlings



45 – 70 pounds --- Horn length, 3.0 to 6.5 inches  
Obviously smaller in late summer. Horns up to one and a half  
times ear length by fall.  
Frequently “picked on” by older animals.



## Nanny, Sub-adult



65 – 100 pounds --- Horn length, 5.5 to 8.5 inches

Body size nearly equal to an adult by fall. Horns are longer than ears. Horns are thinner and usually slightly more angular (see arrow) than males' as viewed laterally. More space between the bases as viewed frontally.

## Billy, Sub-adult

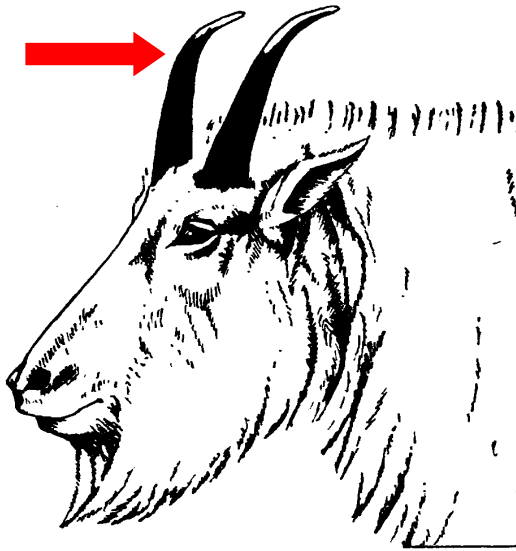
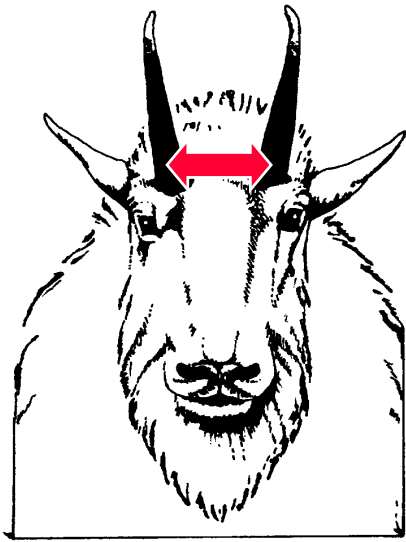


65 – 110 pounds --- Horn length, 5.5 to 8.5 inches

Body slightly larger and heavier over neck and shoulders than females. Usually still in company of female/kid groups during the summer.

Horns thicker than females' with less space between bases. Smoother curve from base to tip

## Nanny, Adult



120 – 160 pounds --- Horn length, 8-11 inches

Faces long and angular. May have kids at side. Usually in groups with other females and juveniles. Side of rump, usually not stained.

Horns thinner than males and more angular (see arrow). Space between horn bases is wider than males and is about equal to  $\frac{3}{4}$  the width of horn base.

## Billy, Adult

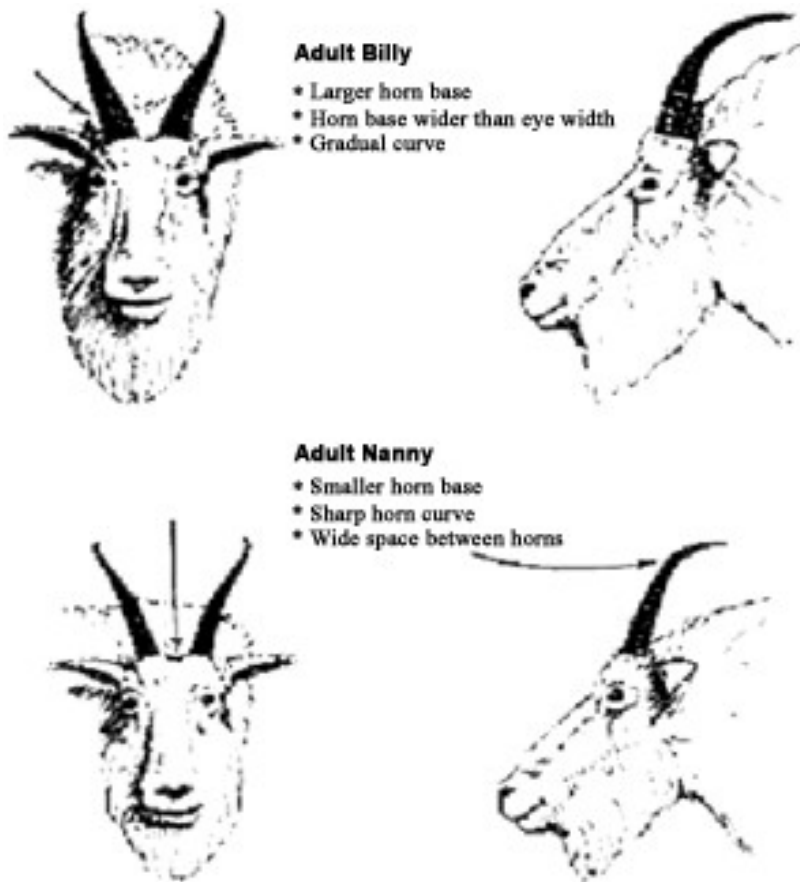


150 – 225 Pounds --- Horn length, 8 – 11 inches

Rump progressively more dirt smeared in late summer and into winter. Neck and shoulders massive. Often solitary.

Horns more massive than females', tapering and curving smoothly from base to tip as viewed laterally; horn base heavy, and space between bases is about one-half the width of the base. Horns may appear smaller because of the large head and body size

# How to Judge Sex and Age by Horn Size and Appearance



Horn lengths are approximately the same in male and female goats of the same age. Kids have only short buttons up to one inch long during their first fall. By the time a goat reaches the yearling age class, it has attained over half its expected horn length. Most yearling goats have horns about six inches long, which at a casual glance look much like adult horns. Although goats live to be ten years old or older, the annual horn growth increments are frequently less than 1/10 inch after the fourth year.

It is extremely difficult to estimate a goat's horn length in the field, since in most cases we are talking about an inch. In the Boone and Crocket Club record book the top ten record billys all had horns longer than 10 inches. One tool a person can use to compare the length of a goat's horn to the length of the ear. Generally an adult goat's ear is about six inches long. So, an ear length and one half should equal a 9-10" horn length. Goat's two years old and older will have horn lengths longer than their total ear length.

Brooming (or the wearing down of the tip of the horn) will also affect the total length of a goat horn. Most billys that are four years old or older show evidence of brooming. Two eleven year old billys which were harvested on Kodiak during the 2000 fall season differed by over an inch (8 ¾ inches versus 10 ¼ inches) because of the wearing down of tips of the horns.

Since horn length is essentially indistinguishable from a distance, other horn characteristics can be used to distinguish the two sexes. Males have thicker horns, with a greater basal diameter and greater diameter along the entire length of the horn. Female horns are thinner and more spindly.

Horn curvature also differs significantly between most males and females. Males exhibit a smooth, even curvature throughout the entire length of the horn, while females exhibit the greatest curvature near the tips. Most female horns seem to make an abrupt curve about 2/3 of the way to the tips.

Comparing the width of the base of horn with the width of a goat's eye, probably provides one of the best ways to distinguish the sex of mature goats. Mature billys will have bases which are greater than the width of his eye. Even the oldest nanny will have horn bases equal to or less than her eye width.

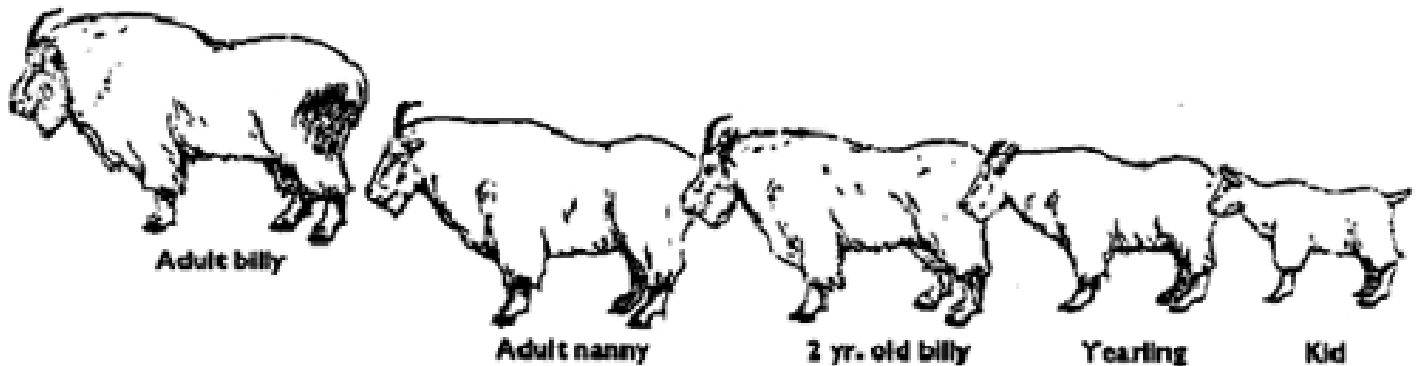
You can practice your sexing technique by looking at pictures of hunters with their trophies on the web or in hunting magazines. Before reading the fine print on the bottom of the picture, guess whether it's a billy or nanny by comparing horn characteristics.

Most seasoned goat hunters agree that horn characteristics are an excellent way to tell the difference between nannies and billys, but all hunters agree that getting close to the animal is key to confirm ones observations.

By getting close enough to use horn characteristics to identify a goat's sex you accomplish two things; first, you reduce the chance of taking a male by mistake and second, you will greatly increase your chances of a clean kill because you have reduced the range. Impatient hunters that take long shots have a higher risk of wounding loss, carcass and horn damage from falls, and self injury from trying to recover a kill from steep terrain.



# Using Body Size to Judge Sex and Age



Body size can be used to sort kids, yearlings, and adults. Kids are easily recognized by their small size, weighing only about 35 lbs. and standing 20" at the front shoulder. Yearlings weigh about 60-70 lbs. and stand about 27" at the shoulder. Once an animal is older than two years they are extremely hard to discern from other adults. Adult billies average about 150 lbs., but may weigh up to 300 lbs. They can also be distinguished from a distance because they are larger and stockier than nannies. Adult females average about 125 lbs. and can reach a maximum weight of 250 lbs. Body size alone can not be a reliable indicator of a goat's sex, since in some groups of goats an old female can be the largest goat in the herd.

## Behavioral Characteristics Provide More Clues to a Goat's Sex

Goats are frequently seen in groups of varying sizes. Groups larger than three or four animals are usually made up of kids, adult females, and immature goats of both sexes. The likelihood of adult males being with these groups increases in November as breeding season approaches. During most of the year adult males are more frequently found as solitary animals or in small isolated groups. If you see a lone animal bedded on the edge of a 2,000 foot cliff, chances are good it's a mature billy. If adult males are found with larger groups of goats, look for them on the edge of the group. After a few minutes of careful observation, it usually becomes apparent which are females and which are males.

Goats usually have only one kid, but twins sometimes occur. If you see a nanny with three or more kids you can bet that the rest of the group is on the other side of the ridge. Mountain goats generally have lower productivity than other game animals because of high mortality of kids and yearling animals. Maintaining a high number of mature females is desirable for good management of goats.



**Yellow Stained Rump Patch**



## Urination Postures

Another way to distinguish the sex of a goat is the urination posture. Males stretch their hind legs backward, slightly flexing and barely splaying their legs to the side. Billies often will have a yellow stained patch of hair on their hindquarters. The patch becomes more evident around the end of September and can be observed clearly from a good distance away. Females squat to urinate, partially raising their tails and usually do not have any stains on their hindquarters.



**Billy**



**Nanny**

## Remember, Patience Is Key



### **LOOK FOR**

Horn Mass

Horn Shape

Body Size

Shoulder Size

Rump Staining (or lack thereof)

External Genitalia

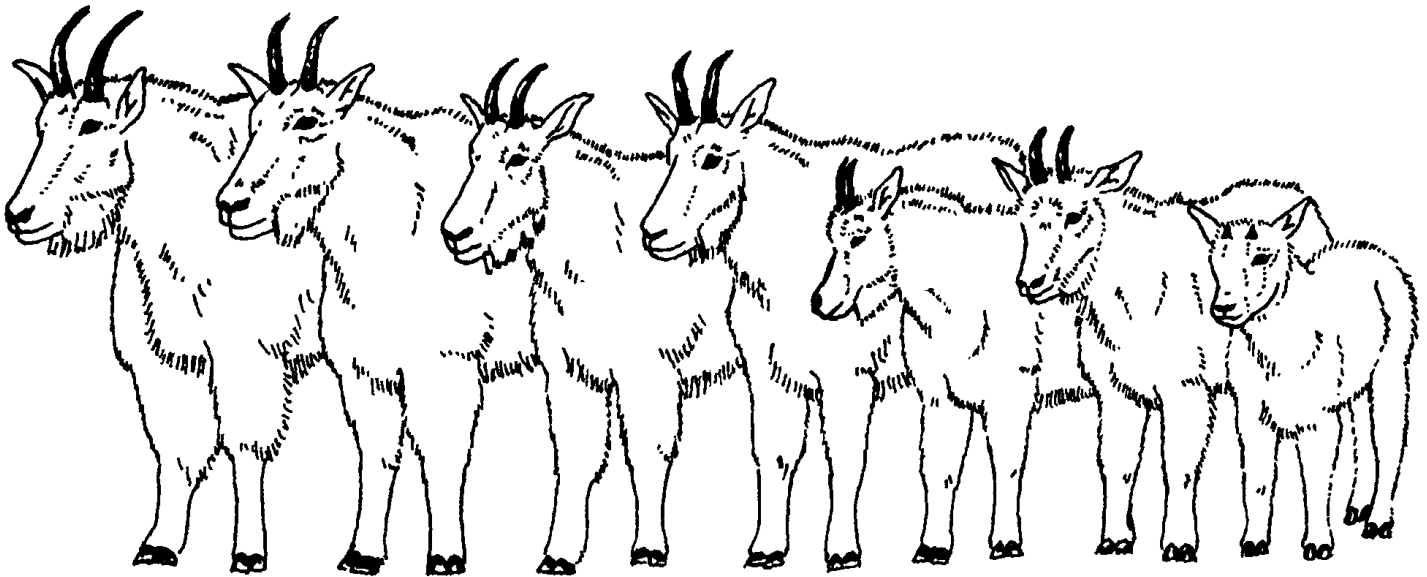
Nanny-Kid Association

Urinating Posture

## Helpful Hints to Insure an Overall Successful Experience

- (23-20-31) Hunter orange is not required when hunting Rocky Mountain Goats unless there is another big game hunt in progress. Because big game hunt overlaps exist (moose and elk) please consult the proclamation to determine when hunter orange is required.
- (23-20-30) Remember to tag your animal before the carcass is moved or you leave the site of kill.
- (657-5-19) Remember to leave evidence of sex attached to the largest portion of the carcass.
- (23-20-8) It is unlawful for a person to waste or permit to be wasted (spoiled) any protected wildlife or any part of them.
- Extreme care should be taken before you shoot. Nannies can be hard to determine from some angles. If a mistake is made and a billy was taken, please contact the Help Stop Poaching Hotline at 1-800-662-3337 or the local sheriff or highway patrol dispatcher. They will send an officer to investigate. A decision on any action taken will be based upon the officer's investigation and the fact that you contacted the Division and did not allow the animal to waste.
- Remember leaving the animal to waste could result in 3<sup>rd</sup> degree Felony charges regardless of whether the death of the animal was an honest mistake or not. It is in your best interest to contact a Division conservation officer and report any mistakes.
- Report violations to the Help Stop Poaching Hotline: 1-800-662-DEER

## Kid to Adult



### Criteria for Distinguishing Sex

#### Possible Features

- Horn Mass
- Horn Shape
- Body Size
- Group Size
- Shoulder Size
- Rump Cleanliness

#### Positive Features

- External Genitalia
- Nanny-Kid Association
- Urinating Posture





# Mountain Goat Sex Identification

## Test Photos











7.



8.







# Mountain Goat Identification Self Test

Please check Billy or Nanny for each question.

1. \_\_\_\_ Billy \_\_\_\_ Nanny

2. \_\_\_\_ Billy \_\_\_\_ Nanny

3. \_\_\_\_ Billy \_\_\_\_ Nanny

4. \_\_\_\_ Billy \_\_\_\_ Nanny

5. \_\_\_\_ Billy \_\_\_\_ Nanny

6. \_\_\_\_ Billy \_\_\_\_ Nanny

7. \_\_\_\_ Billy \_\_\_\_ Nanny

8. \_\_\_\_ Billy \_\_\_\_ Nanny

9. \_\_\_\_ Billy \_\_\_\_ Nanny

10. \_\_\_\_ Billy \_\_\_\_ Nanny

Now that you have completed the test see below for the answers. **DON'T FORGET TO MAIL IN YOUR TEST.**

Name\_\_\_\_\_

Address\_\_\_\_\_

Phone Number:\_\_\_\_\_ Permit Number:\_\_\_\_\_

Answers: 1) Nanny 2) Billy 3) Nanny 4) Billy 5) Nanny showing horn structure and vulva patch 6) Billy 7) Nanny  
8) Adult Nanny and kid 9) Nanny 10) Billy